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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LEE, DANIEL H.

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/518,236	<b>Applicant(s)</b> NILSSON ET AL.	
	<b>Examiner</b> DANIEL LEE	<b>Art Unit</b> 4122	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 27-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 27-41 is/are rejected.
- 7) ☒ Claim(s) 34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20041216</u> .  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. Applicant's election without traverse of Group I, claims 27-41, in the reply filed on April 21, 2009 is acknowledged.

#### *Claim Objections*

2. Claim 34 objected to because of the following informalities: Grammatical error in claim 34: "elements are have" should be "elements have." Appropriate correction is required.

#### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 27-29, 35, and 36 rejected under 35 U.S.C. 102(b) as being anticipated by Dietzsch et al. (US 3773584).**

5. Regarding claim 27, Dietzsch et al. (hereinafter Dietzsch) teaches a method for making a cellular structure comprising a plurality of elements, which method comprises the following steps: **a)** providing a first plurality of uniform elements, which form a first row of elements (see Fig. 1; tubes in block 5); **b)** providing a second plurality of uniform elements, which also have the same shape as the elements in the first plurality and which form a second row of elements (see Fig. 1; tube sections 1", 2", 3", 4"), the second row containing as many elements as the first row and being parallel to the first row but displaced by a certain distance in its longitudinal direction in relation to the first

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row, which distance is less than the extension of one of the uniform elements in the longitudinal direction of the two rows (col. 5, lines 43-45; disposed in the same planes or are alternately offset); **c)** applying an adhesive to the elements in at least one of the two rows (see col. 2, line 60 to col. 3, line 2; see also col. 6, lines 7-9; spray... bonding materials... surface of the tubes); **d)** bringing at least one of the two rows closer to the other so that the two rows are brought together and thereby bonded to one another by the adhesive (see Fig. 1; arrow 12).

**6.** Regarding claims 28 and 36, Dietzsch teaches a method for making a cellular structure comprising a plurality of elements, which method comprises the following steps: **a)** providing a first plurality of uniform elements, which form a first row of elements (see Fig. 1; tubes in block 5); **b)** providing a second plurality of elements, which form a second row of elements, which second row is parallel to the first row (see Fig. 1; tube sections 1", 2", 3", 4"); **c)** applying an adhesive to the elements in at least one of the rows (see col. 2, line 60 to col. 3, line 2; see also col. 6, lines 7-9; spray... bonding materials... surface of the tubes); **d)** bringing at least one of the two rows closer to the other so that the two rows are brought together and thereby bonded to one another by the adhesive so that the two rows thereby form a composite cellular structure, which cellular structure is then located in a first position (see Fig. 1; arrow 12); **e)** providing a third plurality of elements which form a third row of elements, which third row of elements is parallel to the rows in the composite cellular structure (see Fig. 1; tubes 1, 2, 3, 4); **f)** moving the cellular structure a certain distance in the longitudinal direction of the first and the second row of elements, so that the cellular structure is

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moved from the first position to a second position (see Fig. 1; arrow 13); **g)** applying an adhesive to the elements in at least one of the second row and third row, the adhesive being applied either before, after, or at the same time as the cellular structure is moved to the second position (col. 6, lines 7-9; spray... bonding materials... surface of the tubes); **h)** bringing the third row and the cellular structure together with one another so that they are thereby bonded to one another by the adhesive, due to which the third row becomes part of the cellular structure (see Fig. 1; arrow 12).

**7.** Regarding claim 29, Dietzsch teaches a method for making a cellular structure comprising a plurality of elements, which method comprises the following steps: **a)** providing a first plurality of elements, which forms a first row of elements (see Fig. 1; tubes in block 5); **b)** providing a second plurality of elements, which forms a second row of elements (see Fig. 1; tube sections 1", 2", 3", 4"); **c)** applying an adhesive to the elements in at least one of the two rows (see col. 2, line 60 to col. 3, line 2; see also col. 6, lines 7-9; spray... bonding materials... surface of the tubes); **d)** bringing the elements in at least one of the two rows closer to the other so that the two rows are brought together and thereby bonded to one another by the adhesive to form a cellular structure thereby (see Fig. 1; arrow 12).

**8.** Regarding claim 35, Dietzsch teaches a method for making a cellular structure comprising a plurality of elements, which method comprises the following steps: **a)** providing a first plurality of uniform circular-cylindrical elements, which form a first row of elements (see Fig. 1; tubes in block 5); **b)** providing a second plurality of elements, which have the same shape as the elements in the first plurality and which form a

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second row of elements (see Fig. 1; tube sections 1", 2", 3", 4"), which second row is parallel to the first row but displaced in phase in relation to the first row (col. 5, lines 43-45; disposed in the same planes or are alternately offset); **c)** applying an adhesive to the elements in at least one of the two rows (see col. 2, line 60 to col. 3, line 2; see also col. 6, lines 7-9; spray... bonding materials... surface of the tubes); **d)** bringing at least one of the two rows closer to the other so that the two rows are brought together and thereby bonded to one another by the adhesive to thereby form a composite cellular structure (see Fig. 1; arrow 12).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**11. Claims 31-32 and 37 rejected under 35 U.S.C. 103(a) as being unpatentable over Dietzsch et al. (US 3773584).**

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12. Dietzsch is applied as in the rejection under 35 U.S.C. 102(b) rejection of claims 27-29, 35, and 36 above but does not expressly teach that the second plurality of elements are fed from two opposite directions, which opposite directions are both parallel to the first row of elements, the elements being transported until the elements that are fed in one direction meet elements that have been transported in the opposite direction and together with the elements transported from the other direction form a second row of elements, and the bringing of at least one of the two rows closer to the other taking place after the second row has been formed.

13. Regarding claims 31 and 37, Dietzsch does, however, teach that the tubes and tube sections can also be moved in directions other than shown in Fig. 1 (see col. 5, lines 37-42). In light of this teaching, one of ordinary skill in the art would appreciate that the elements could be fed from opposite directions and moved in the directions as claimed if it would make the process more efficient.

14. Regarding claim 32, Dietzsch teaches the feed is interrupted after a predetermined number of elements has been transported (see claim 2; manufacturing processes are interrupted for a short time... formed tube lengths are secured in position). Dietzsch does not expressly teach the feed from each direction is interrupted. However, as stated above, one of ordinary skill in the art would appreciate that elements could be fed from each direction in light of the aforementioned teaching.

**15. Claims 30, 33, 34, 38 and 39 rejected under 35 U.S.C. 103(a) as being unpatentable over Dietzsch et al. (US 3773584) as applied to claims 27-29, 31, 32, and 35-37 above in view of Court et al. (US 6199342).**

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16. Regarding claim 30, Dietzsch teaches the second plurality of elements is provided in that elements intended to form the second plurality of elements are fed in a direction parallel to the first row of elements until a predetermined number of elements, which form a second row parallel to the first, are located in a predetermined position, so that the second row is complete (see Fig. 1; arrow 12). Dietzsch does not expressly teach the bringing of the elements in at least one of the two rows closer to the other taking place after the second row has reached its predetermined position. Court et al. (hereinafter Court) teaches the bringing of the elements in at least one of the two rows closer to the other taking place after the second row has reached its predetermined position (see Fig 7; row 40). It would have been obvious to one of ordinary skill in the art at the time of the invention to bring the elements of the rows together after the second row was complete and had reached its predetermined position. The rationale to do so would have been provided by the teaching of Court that to do so would predictably facilitate forming a stack of rows aligned in abutting relationship to one another (see col. 7, lines 40-43)

17. Regarding claim 33, Dietzsch teaches the feed is interrupted after a predetermined number of elements has been transported (see claim 2; manufacturing processes are interrupted for a short time... formed tube lengths are secured in position).

18. Regarding claim 34, Dietzsch teaches that all elements have the same shape and that they have a circular-cylindrical shape (see Fig. 1; tubes 1, 2, 3, 4).



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19. Regarding claim 38, Dietzsch teaches the feed is interrupted after a predetermined number of elements has been transported as stated in the rejection of claim 32 and 33 above. Court teaches bringing together the elements of the second row and first row after the second row has reached its predetermined position, which in this case, is when the feed is interrupted.

20. Regarding claim 39, Dietzsch teaches the bringing together of the elements in the first and the second row of elements takes place in that the elements in the second row are conveyed simultaneously towards the first row so that the whole of the second row is conveyed towards the first row as a coherent unit (see Fig. 1; arrow 12 and tube sections 1", 2", 3", 4").

**21. Claims 40-41 rejected under 35 U.S.C. 103(a) as being unpatentable over Dietzsch et al. (US 3773584) in view of Court et al. (US 6199342) as applied to claims 27-39 above, and further in view of Voltmer et al. (US 4555299).**

22. Dietzsch teaches the circular cylindrical elements being fed and adhesive being applied onto the plurality of elements. Court teaches the elements being added in rows when a row reaches a predetermined position.

23. Regarding claim 40, the above references do not teach that the elements fed in both directions pass a detector linked to a control unit which recognizes in this way how many circular-cylindrical elements pass the detector, and that after a predetermined number of elements has passed, the logic unit emits a signal that the feed is to be interrupted. Voltmer et al. (hereinafter Voltmer) teaches a detector (col. 4, line 53;

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product sensor 114) linked to a control unit wherein the logic unit (col. 4, line 57; logic unit 138) emits a signal (col. 4, line 57; signal) to a drive unit.

24. Regarding claim 41, the above references do not teach adhesive is applied to the elements in a row in that a carriage provided with at least one sensor and a nozzle connected to a source of adhesive is guided along the row at a predetermined speed, the sensor being placed at a distance from the nozzle and detecting the presence or absence of an element and emitting a signal to a logic unit when the presence of an element is detected, and the logic unit, starting out from the known speed and the distance between the nozzle and the sensor of the carriage, calculates the time that remains until the nozzle is located in a certain position in relation to an element detected by the sensor and sends a pulse to activate the nozzle when the time calculated has elapsed. Voltmer teaches an adhesive (col. 4, line 60; tape 101) is applied to an element (col. 4, line 62; bottle 24) until a signal (col. 4, line 63) is sent to the logic unit (col. 4, line 64; logic unit 138) to terminate operation. Although, Voltmer does not expressly teach a carriage with a nozzle to apply adhesive, a tape roll with tape is an obvious variant of adhesive. See col. 4, lines 51 - end.

25. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Dietzsch and Court to include the adhesive-applying control system of Voltmer. The rationale to do so would have been provided by the teaching of Voltmer that to do so would predictably synchronize the motion of the adhesive relative to the elements (col. 4, lines 51-55).

***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL LEE whose telephone number is (571)270-7711. The examiner can normally be reached on Monday-Thursday, 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. L./  
Examiner, Art Unit 1791

/Richard Crispino/  
Supervisory Patent Examiner, Art Unit 1791